

CLAIMS

What is claimed is:

- 1 1. A method of selecting a link set of a telecommunications
2 network for routing a message having a destination point code and a signaling link selection code,
3 comprising the steps of:
4 maintaining a link selector value in a memory;
5 determining that the message does not require in-sequence
6 delivery; and
7 selecting the link set according to the combination of the destination point code,
8 the signaling link selection code, and the link selector value.
- 1 2. The method of Claim 1, wherein the link selector value may be assigned
2 an initial value and a maximum value, and wherein the step of maintaining a link selector value in
3 the memory further includes the steps of:
4 a) initializing the link selector value to the initial value;
5 b) incrementing the link selector value to provide an incremented link selector
6 value; and
7 c) otherwise, if incrementing the link selector value provides an incremented
8 link selector value which is greater than the maximum value, resetting the link selector value
9 to the initial value.

1 3. The method of Claim 2, wherein steps b and c are repeated.

1 4. The method of Claim 2, wherein the step of incrementing the link selector
2 value occurs after the step of selecting the link set is accomplished.

1 5. The method of Claim 1, wherein the step of determining that the message
2 does not require in-sequence delivery further includes the step of:
3 receiving a request for delivery of the message.

1 6. The method of Claim 5, wherein the request includes a bit indicating
2 whether in-sequence message delivery is required, and wherein the step of receiving a request for
3 delivery of the message includes the step of:
4 testing the value of the bit to determine whether in-sequence delivery is required.

1 7. The method of Claim 5, wherein the message includes a Service
2 Information Octet having a sub-service field including a bit indicating whether in-sequence message
3 delivery is required, and wherein the step of receiving a request for delivery of the message includes
4 the step of:
5 testing the value of the bit to determine whether in-sequence delivery is required.

- 1 8. The method of Claim 1, wherein the telecommunications network includes
- 2 a first node and a second node, further including the steps of:
- 3 including a request for out-of-sequence delivery within the message; and
- 4 routing the message over the link set from the first node to the second node.

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1 9. A memory node including a load sharing memory having a list of load
2 sharing link sets included within a telecommunications network having a receiving node, wherein
3 a message is routed to the receiving node over a selected one of the load sharing link sets,
4 comprising:

5 a link selector memory for maintaining a link selector value which is associated with
6 an initial value and a maximum value, wherein the link selector value is initialized to the
7 initial value, wherein the link selector value is incremented before the message is sent to the
8 receiving node over the selected one of the load sharing link sets, and wherein the link
9 selector value is reset to the initial value whenever incrementing the link selector value
10 provides an incremented link selector value which is greater than the maximum value.

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1 10. A telecommunications network including a plurality of load sharing link sets
2 for routing a message, comprising:
3 a sending node;
4 a memory node in electronic communication with the sending node, including a
5 load sharing memory having a list of the load sharing link sets, a signaling link memory for
6 storing a signaling link selection code, and a link selector memory for maintaining a link
7 selector value associated with a maximum value; and
8 a receiving node in electronic communication with the sending node, wherein the
9 message is routed to the receiving node over a selected one of the load sharing link sets
10 causing the link selector value to be incremented, and wherein the link selector value is
11 reset to the initial value whenever incrementing the link selector value provides an
12 incremented link selector value which is greater than the maximum value.

1 11. The telecommunications network of Claim 10, wherein the receiving node
2 is adapted to receive a request for out-of-sequence delivery.

1 12. The telecommunications network of Claim 10 wherein the sending node
2 is adapted to send a request for delivery of the message.

1 13. The telecommunications network of Claim 12, wherein the request includes
2 a bit having a first value and a second value, wherein the first value indicates that out-of-sequence

1 delivery is requested, and wherein the second value indicates that in-sequence delivery is
2 requested.

1 14. The telecommunications network of Claim 10, wherein the message
2 includes a Service Information Octet having a sub-service field including a bit having a first value
3 and a second value, wherein the first value indicates that out-of-sequence delivery is requested, and
4 wherein the second value indicates that in-sequence delivery is requested.